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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Shalaby W. Shalaby et al                      Art Unit : Unknown  
Serial No. : 09/807,087                                      Examiner : Unknown  
Filed : April 9, 2001  
Title : IONIC MOLECULAR CONJUGATES OF N-ACYLATED DERIVATIVES OF  
POLY(2-AMINO-2-DEOXY-D-GLUCOSE) AND POLYPEPTIDES

**BOX PCT**

Commissioner for Patents  
Washington, D.C. 20231

RESPONSE TO NOTIFICATION TO COMPLY WITH REQUIREMENTS  
FOR PATENT APPLICATIONS CONTAINING  
NUCLEOTIDE AND/OR AMINO ACID SEQUENCES

In response to the communication dated May 9, 2001 (copy enclosed), applicants submit herewith a Sequence Listing in computer readable form as required by 37 CFR §1.824. In addition, applicants submit an initial Sequence Listing as required under 37 CFR §1.823(a) and a statement under 37 CFR §1.821(f).

Applicants respectfully request entry of the paper copy and computer readable copy of the Sequence Listing filed herewith for the instant application. Furthermore, applicants request entry of the following amendments.

In the specification:

Insert the paper copy of the Sequence Listing filed herewith following the Oath/Declaration.

Replace the paragraph beginning at page 6, line 14, with the following rewritten paragraph:

--Examples of other somatostatin analogs include, but are not limited to, the following somatostatin analogs which are disclosed in the above-cited references:

## CERTIFICATE OF MAILING BY EXPRESS MAIL

Express Mail Label No. EL 485514438 US

I hereby certify under 37 CFR §1.10 that this correspondence is being deposited with the United States Postal Service as Express Mail Post Office to Addressee with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit 11-7-01Signature Leroy JenkinsTyped or Printed Name of Person Signing Certificate Leroy Jenkins

H- $\beta$ -D-Nal-Cys-Tyr-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub> acetate salt (also known as SOMATULINE™), where the two Cysteines are bonded by a disulfide bond;

H-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Cys- $\beta$ -Nal-NH<sub>2</sub>;

H-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Cys- $\beta$ -Nal-NH<sub>2</sub>;

H-D- $\beta$ -Nal-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

H-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Pen-Thr-NH<sub>2</sub>;

H-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Pen-Thr-NH<sub>2</sub>;

H-D-Phe-Cys-Tyr-D-Trp-Lys-Thr-Pen-Thr-OH;

H-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Pen-Thr-OH;

H-Gly-Pen-Phe-D-Trp-Lys-Thr-Cys-Thr-OH;

H-Phe-Pen-Tyr-D-Trp-Lys-Thr-Cys-Thr-OH;

H-Phe-Pen-Phe-D-Trp-Lys-Thr-Pen-Thr-OH;

H-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-ol;

H-D-Phe-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

H-D-Trp-Cys-Tyr-D-Trp-Lys-Val-Cys-Thr-NH<sub>2</sub>;

H-D-Trp-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

H-D-Phe-Cys-Tyr-D-Trp-Lys-Val-Cys-Thr-NH<sub>2</sub>;

H-D-Phe-Cys-Tyr-D-Trp-Lys-Val-Cys-Trp-NH<sub>2</sub>;

H-D-Phe-Cys-Tyr-D-Trp-Lys-Val-Cys-Thr-NH<sub>2</sub>;

Ac-D-Phe-Lys\*-Tyr-D-Trp-Lys-Val-Asp\*-Thr-NH<sub>2</sub> (an amide bridge formed between Lys\* and Asp\*);

Ac-hArg (Et)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

Ac-D-hArg (Et)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

Ac-D-hArg (Bu)-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

Ac-D-hArg (Et)<sub>2</sub>-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

Ac-L-hArg (Et)<sub>2</sub>-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;

Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Phe-NH<sub>2</sub>;

Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NHEt;

Ac-L-hArg (CH<sub>2</sub>-CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;  
Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys (Me)-Thr-Cys-Thr-NH<sub>2</sub>;  
Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys (Me)-Thr-Cys-Thr-NHEt;  
Ac-hArg (CH<sub>3</sub>, hexyl)-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;  
H-hArg (hexyl)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;  
Ac-D-hArg (Et)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NHEt;  
Ac-D-hArg (Et)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Phe-NH<sub>2</sub>;  
Propionyl-D-hArg (Et)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys (iPr)-Thr-Cys-Thr-NH<sub>2</sub>;  
Ac-D-β-Nal-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Gly-hArg (Et)-NH<sub>2</sub>;  
Ac-D-Lys (iPr)-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;  
Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-D- hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;  
Ac-D-hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-D- hArg (CH<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Phe-NH<sub>2</sub>;  
Ac-D-hArg (Et)<sub>2</sub>-D-hArg (Et)<sub>2</sub>-Gly-Cys-Phe-D-Trp-Lys-Thr-Cys-Thr-NH<sub>2</sub>;  
Ac-Cys-Lys-Asn-4-Cl-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-Ser-D-Cys-NH<sub>2</sub>;  
H-Bmp-Tyr-D-Trp-Lys-Val-Cys-Thr-NH<sub>2</sub>;  
H-Bmp-Tyr-D-Trp-Lys-Val-Cys-Phe-NH<sub>2</sub>;  
H-Bmp-Tyr-D-Trp-Lys-Val-Cys-p-Cl-Phe-NH<sub>2</sub>;  
H-Bmp-Tyr-D-Trp-Lys-Val-Cys-β-Nal-NH<sub>2</sub>;  
H-D-β-Nal-Cys-Tyr-D-Trp-Lys-Val-Cys-Thr-NH<sub>2</sub>;  
H-D-Phe-Cys-Tyr-D-Trp-Lys-Abu-Cys-Thr-NH<sub>2</sub>;  
H-D-Phe-Cys-Tyr-D-Trp-Lys-Abu-Cys-β-Nal-NH<sub>2</sub>;  
H-pentafluoro-D-Phe-Cys-Tyr-D-Trp-Lys-Lys-Val-Cys-Thr-NH<sub>2</sub>;  
Ac-D-β-Nal-Cys-pentafluoro-Phe-D-Trp-Lys-Val-Cys-Thr-NH<sub>2</sub>;  
H-D-β-Nal-Cys-Tyr-D-Trp-Lys-Val-Cys-β-Nal-NH<sub>2</sub>;  
H-D-Phe-Cys-Tyr-D-Trp-Lys-Val-Cys-β-Nal-NH<sub>2</sub>;  
H-D-β-Nal-Cys-Tyr-D-Trp-Lys-Abu-Cys-Thr-NH<sub>2</sub>;  
H-D-p-Cl-Phe-Cys-Tyr-D-Trp-Lys-Abu-Cys-Thr-NH<sub>2</sub>;  
Ac-D-p-Cl-Phe-Cys-Tyr-D-Trp-Lys-Abu-Cys-Thr-NH<sub>2</sub>;  
H-D-Phe-Cys-β-Nal-D-Trp-Lys-Val-Cys-Thr-NH<sub>2</sub>;  
H-D-Phe-Cys-Tyr-D-Trp-Lys-Cys-Thr-NH<sub>2</sub>;

cyclo(Pro-Phe-D-Trp-N-Me-Lys-Thr-Phe);  
cyclo(Pro-Phe-D-Trp-N-Me-Lys-Thr-Phe);  
cyclo(Pro-Phe-D-Trp-Lys-Thr-N-Me-Phe);  
cyclo(N-Me-Ala-Tyr-D-Trp-Lys-Thr-Phe);  
cyclo(Pro-Tyr-D-Trp-Lys-Thr-Phe);  
cyclo(Pro-Phe-D-Trp-Lys-Thr-Phe);  
cyclo(Pro-Phe-L-Trp-Lys-Thr-Phe) (SEQ ID NO:1);  
cyclo(Pro-Phe-D-Trp(F)-Lys-Thr-Phe);  
cyclo(Pro-Phe-Trp(F)-Lys-Thr-Phe) (SEQ ID NO:2);  
cyclo(Pro-Phe-D-Trp-Lys-Ser-Phe);  
cyclo(Pro-Phe-D-Trp-Lys-Thr-p-Cl-Phe);  
cyclo(D-Ala-N-Me-D-Phe-D-Thr-D-Lys-Trp-D-Phe);  
cyclo(D-Ala-N-Me-D-Phe-D-Val-Lys-D-Trp-D-Phe);  
cyclo(D-Ala-N-Me-D-Phe-D-Thr-Lys-D-Trp-D-Phe);  
cyclo(D-Abu-N-Me-D-Phe-D-Val-Lys-D-Trp-D-Tyr);  
cyclo(Pro-Tyr-D-Trp-t-4-AchxAla-Thr-Phe);  
cyclo(Pro-Phe-D-Trp-t-4-AchxAla-Thr-Phe);  
cyclo(N-Me-Ala-Tyr-D-Trp-Lys-Val-Phe);  
cyclo(N-Me-Ala-Tyr-D-Trp-t-4-AchxAla-Thr-Phe);  
cyclo(Pro-Tyr-D-Trp-4-Amphe-Thr-Phe);  
cyclo(Pro-Phe-D-Trp-4-Amphe-Thr-Phe);  
cyclo(N-Me-Ala-Tyr-D-Trp-4-Amphe-Thr-Phe);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Gaba);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Gaba-Gaba);  
cyclo(Asn-Phe-D-Trp-Lys-Thr-Phe);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-NH(CH<sub>2</sub>)<sub>4</sub>CO);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-β-Ala);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-D-Glu)-OH;  
cyclo(Phe-Phe-D-Trp-Lys-Thr-Phe);  
cyclo(Phe-Phe-D-Trp-Lys-Thr-Phe-Gly);

cyclo(Phe-Phe-D-Trp-Lys-Thr-Phe-Gaba);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Gly);  
cyclo(Asn-Phe-Phe-D-Trp(F)-Lys-Thr-Phe-Gaba);  
cyclo(Asn-Phe-Phe-D-Trp(NO<sub>2</sub>)-Lys-Thr-Phe-Gaba);  
cyclo(Asn-Phe-Phe-Trp(Br)-Lys-Thr-Phe-Gaba) (SEQ ID NO:3);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Phe(I)-Gaba);  
cyclo(Asn-Phe-Phe-D-Trp-Lys-Thr-Tyr(But)-Gaba);  
cyclo(Bmp-Lys-Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-Pro-Cys)-OH;  
cyclo(Bmp-Lys-Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-Pro-Cys)-OH;  
cyclo(Bmp-Lys-Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-Tpo-Cys)-OH;  
cyclo(Bmp-Lys-Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-MeLeu-Cys)-OH;  
cyclo(Phe-Phe-D-Trp-Lys-Thr-Phe-Phe-Gaba);  
cyclo(Phe-Phe-D-Trp-Lys-Thr-Phe-D-Phe-Gaba);  
cyclo(Phe-Phe-D-Trp(5F)-Lys-Thr-Phe-Phe-Gaba);  
cyclo(Asn-Phe-Phe-D-Trp-Lys(Ac)-Thr-Phe-NH-(CH<sub>2</sub>)<sub>3</sub>-CO);  
cyclo(Lys-Phe-Phe-D-Trp-Lys-Thr-Phe-Gaba);  
cyclo(Lys-Phe-Phe-D-Trp-Lys-Thr-Phe-Gaba);  
cyclo(Orn-Phe-Phe-D-Trp-Lys-Thr-Phe-Gaba);  
H-Cys-Phe-Phe-D-Trp-Lys-Thr-Phe-Cys-NH<sub>2</sub>;  
H-Cys-Phe-Phe-D-Trp-Lys-Ser-Phe-Cys-NH<sub>2</sub>;  
H-Cys-Phe-Tyr-D-Trp-Lys-Thr-Phe-Cys-NH<sub>2</sub>; and  
H-Cys-Phe-Tyr(I)-D-Trp-Lys-Thr-Phe-Cys-NH<sub>2</sub>--